states: Expanded Disability Status Scale (EDSS) 0-9 for patients with RRMS and secondary progressive multiple sclerosis (SPMS), respectively, and death (EDSS10). Total treatment costs, quality-adjusted life-years (QALYs) gained and incremental cost-effectiveness ratios (ICERs) were calculated from the Dutch societal perspective. Baseline demographics; transition probabilities; treatment-specific relative risks; and utility values were obtained from published literature. Health resource use was based on the products' SmPCs. Unit costs were based on national tariffs and published data. A base case analysis considered the direct and indirect costs of treatment. To test the robustness of the results, univariate and probabilistic sensitivity analyses (PSA) were performed. **RESULTS:** Total treatment costs of glatiramer acetate were lower versus teriflunomide, interferon-beta-1a 44mcg, 30mcg, fingolimod, natalizumab, dimethyl fumarate and alemtuzumab; and higher versus interferon-beta-1a 22mcg, interferon-beta-1b, and BSC. Glatiramer acetate dominated interferon-beta-1a 44mcg and 30mcg, and was cost-effective versus other comparators at a willingness-to-pay threshold of €20,000/QALY. The PSA indicated these results were robust. Univariate analysis showed that relative risks of disease progression and drug costs were the most influential model parameters. **CONCLUSIONS:** In the Netherlands, glatiramer acetate is a cost-effective treatment versus a number of other treatments indicated in multiple sclerosis, and results proved robust.

Pnd49

EXPECTED VALUE OF PARTIAL PERFECT INFORMATION FOR THE DISABILITY PROGRESSION EFFICACY OF TERIFLUNOMIDE AND FINGOLIMOD IN THE TREATMENT OF RELAPSING-REMITTING MULTIPLE SCLEROSIS

Maruszczak M[1], Kusel J[1], Adlard N[2]
[1]*Costello Medical Consulting Ltd., Cambridge, UK,* [2]*Novartis Pharmaceuticals UK Limited, Surrey, UK*

OBJECTIVES: To calculate the expected value of partial perfect information (EVPPI) of the disability progression efficacy for teriflunomide and fingolimod in relapsing-remitting multiple sclerosis (RRMS) and investigate the potential differences between these two disease modifying therapies (DMTs). **METHODS:** A cohort Markov model based on the ScHARR model structure was developed from the UK NHS perspective, which allows the cost-effectiveness of the DMTs to be calculated and also has the additional ability to calculate the EVPPIs for progression efficacies. The evaluated intervention consists of beta-interferons followed by fingolimod. The comparator treatment includes beta-interferon therapy followed by teriflunomide. The EVPPIs for both drugs were calculated and compared. **RESULTS:** The EVPPIs varied substantially depending on the evaluated drug and the specific willingness-to-pay (WTP). Although both EVPPI curves had a similar shape, the curve for teriflunomide had an EVPPI equal or larger compared to fingolimod's curve for every WTP value. At a WTP of £30,000 per QALY, the EVPPI per patient of teriflunomide and fingolimod were £252 and £50, respectively. In the sensitivity analysis, where the uncertainty around the estimate of teriflunomide progression efficacy was artificially lowered to that of fingolimod, the divergence between the EVPPI curves was reduced substantially, confirming that the uncertainty around teriflunomide progression efficacy is driving its higher EVPPI. **CONCLUSIONS:** Higher EVPPI estimates of teriflunomide indicate that the precise knowledge of the disability progression efficacy of teriflunomide would be considerably more valuable to the decision maker than that of fingolimod. One of the main factors affecting larger EVPPI of teriflunomide's progression efficacy is a higher uncertainty concerning effects of teriflunomide. There are, however, many data limitations and uncertainties within the DMT modelling. Additionally, the expected value of sample information analysis (EVSI) would be required in order to evaluate more precisely the cost-effectiveness of additional clinical trials.

PND50

COST-MINIMISATION ANALYSIS OF COLISTIMETHATE SODIUM IN SERBIA- OFF LABEL USE APPROACH

Djordjevic J[1], Mitrovic M[1], Marinkovic V[1], Tasic L[2], Krajnovic D[2]
[1]*Alvogen Pharma doo Serbia, Belgrade, Serbia and Montenegro,* [2]*University of Belgrade – Faculty of Pharmacy, Belgrade, Serbia and Montenegro*

OBJECTIVES: Colistimethate sodium (Colistin) is an old, "forgotten" antibiotics revived due to multidrug-resistant Gram-negative bacteria in nosocomial infections. In many countries, both – intravenous and inhalational administrations of Colistin have marketing authorisation. In Serbia, Colistin is registered only for intravenous administration. Therefore, inhalational administration of Colistin in treatment for cystic fibrosis is considered as off label use. **AIM:** The purpose of this study was to assess benefits of Colistin off label use, currently available in Serbia, for treatment for cystic fibrosis. **METHODS:** Data collected from a review of the literature (Pubmed searching key word off label, Colistin, Tobramycine, cost minimisation) and data from Health Insurance Fond of Republic Serbia (2014) were used to perform a cost-minimisation analysis comparing DDD in inhalation administration of Colistin with Tobramycin (official methodology in Serbia for drug reimbursement Listing). **RESULTS:** Both, Colistin and Tobramycine are effective in cystic fibrosis treatment. The cost of treatment per patient per year in Serbia is 3 616,00 Euro for Colistin and 5 950,00 Euro for Tobramycin. Total savings per year for 200 registered patients in Serbia could be 466 857,00 Euro. **CONCLUSIONS:** Given cost-minimisation analysis justified the treatment with Colistin as cost saving therapeutic alternative to Tobramycin for cystic fibrosis patients in Serbia. The lack of guidelines and principles regarding off label medicine use in health care policy and decision making in Serbia was evidently an obstacle for better patients care.

PND51

HEALTH CARE UTILIZATION AND COSTS OF MEDICAID PROGRAM SERVICES FOR PATIENTS DIAGNOSED WITH MULTIPLE SCLEROSIS

Li L[1], Shrestha S[1], Baser O[2], Wang L[1]
[1]*STATinMED Research, Plano, TX, USA,* [2]*STATinMED Research and The University of Michigan, Ann Arbor, MI, USA*

OBJECTIVES: Health care resource utilization and costs were evaluated for patients diagnosed with multiple sclerosis (MS) in the U. S. Medicaid program. **METHODS:** Patients diagnosed with MS (International Classification of Disease, 9thRevision, Clinical Modification [ICD-9-CM] diagnosis code 340) were identified using Medicaid data from 01JAN2008 through 31DEC2010. The initial diagnosis date was designated as the index date. Patients of the same age, race, and gender but without an MS diagnosis were identified and matched as the comparison cohort, with a randomly chosen index date to minimize selection bias. Patients in both groups were required to be at least age 18 years, and have continuous medical and pharmacy benefits 1 year before and 1 year post-index date. One-to-one propensity score matching (PSM) was used to compare health care costs and utilizations during the follow-up period, between the diseased and the comparison cohorts, and adjusted for baseline demographic and clinical characteristics. **RESULTS:** After risk adjustment by PSM, a total of 14,179 patients in each cohort were matched. Significantly more MS patients had inpatient admissions (23.75% vs. 10.87%, p<0.0001) and long-term care (22.64% vs. 4.13%, p<0.0001), other service (99.70% vs. 89.00%, p<0.0001) and pharmacy visits (73.08% vs. 67.71%, p<0.0001) compared to those without an MS diagnosis. Higher health care utilization by MS patients led to significantly higher inpatient ($1,688 vs. $725, p<0.0001), long-term care ($14,189 vs. $2,778, p<0.0001), other service visit ($22,981 vs. $9,977, p<0.0001) and pharmacy costs ($5,284 vs. $1,785, p<0.0001) compared to those without MS. **CONCLUSIONS:** Compared to patients in the comparator cohort, MS patients in the Medicaid program incurred substantially higher health care resource utilization and costs.

PND52

COST-UTILITY ANALYSIS (CUA) OF FIRST-LINE DISEASE-MODIFYING TREATMENTS (DMT) VERSUS BEST SUPPORTIVE CARE (BSC) IN FINNISH RELAPSING-REMITTING MULTIPLE SCLEROSIS (RRMS) PATIENTS

Soini E[1], Asseburg C[1], Sumelahti ML[2]
[1]*ESiOR Oy, Kuopio, Finland,* [2]*School of Medicine, University of Tampere, Finland*

OBJECTIVES: CUA of teriflunomide and first-line DMTs (glatiramer acetate (GA), interferon-β-1a (IFNβ-1a: intramuscular IM, or subcutaneous SC) or interferon-β-1b (IFNβ-1b)), compared to BSC in Finnish RRMS-patients. **METHODS:** Register study and Markov cohort modelling. During the 50-year time horizon, patients could stay or progress to another Expanded Disability Status Scale (EDSS) state, experience relapse (with/without hospitalisation), adverse events (AEs) or death. EQ-5D utilities were derived from literature, and Finnish costs (health care 2013; official drug costs 4/2014 without VAT) were associated with EDSS, relapses, and AEs. Indirect treatment comparison informed treatment effects. EDSS-related standardised mortality ratios (SMR) and RRMS-progression were analysed from Finnish MS-register (Tampere, Vaasa, Seinäjoki regions; 1359 patients). Other health risks were based on literature. Cohort characteristics were estimated from a subgroup (713 patients, clinically confirmed RRMS, age, gender and EDSS 0–6.5 at first DMT initiation). Caregiver's disutility, Finnish productivity losses, and informal care costs were included in sensitivity analysis (societal perspective). Costs and quality-adjusted life-years (QALYs) were discounted with 3%/year. **RESULTS:** Expected lifetime health care [societal] costs per patient were: teriflunomide: €798,864 [€1,596,570], IFNβ-1a-SC: €805,069 [€1,618,344], IFNβ-1b: €826,633 [€1,647,745], GA: €823,438 [€1,649,961], IFNβ-1a-IM: €820,516 [€1,645,472], and BSC: €788,932 [€1,626,554]. Respective QALYs were 6.55 [5.44], 6.27 [5.13], 6.15 [4.99], 6.05 [4.88], 6.04 [4.87], and 5.79 [4.60]. From the payer [societal] perspective, incremental cost per QALY gained of teriflunomide was €13,089 [dominant] relative to BSC, and teriflunomide dominated other first-line DMTs. Teriflunomide had 83% [per-patient expected value of perfect information, EVPI €241], 98% [EVPI €22], and 100% [EVPI €0] cost-effectiveness probability with €0, €10,000, and €20,000 per additional QALY, respectively. **CONCLUSIONS:** Cost-effectiveness analyses of first-line DMTs compared to BSC showed that teriflunomide provided lowest cost and highest number of QALYs and was therefore dominant over IFNβs and GA for Finnish RRMS patients.

PND53

COST-EFFECTIVENESS MODEL RESULTS OF INTRATHECAL BACLOFEN THERAPY COMPARED TO CONVENTIONAL MEDICAL MANAGEMENT IN PATIENTS WITH NON-FOCAL DISABLING SPASTICITY WHO ARE RESISTANT OR INTOLERANT TO ORAL THERAPY AT THE INSTITUT GUTTMANN

Slof J[1], Serrano D[2], Álvarez M[3], Álvarez López-Dóriga M[3], Marqués T[4], Benito J[4], Vidal J[4]
[1]*Universitat Autònoma de Barcelona, Bellaterra, Spain,* [2]*Autonomous Consultant, Barbera del Valles, Spain,* [3]*Medtronic Ibérica, S.A., Madrid, Spain,* [4]*Institut Guttmann, Barcelona, Spain*

OBJECTIVES: To estimate the cost-effectiveness of intrathecal baclofen therapy (ITB) against conventional medical management (CMM) in non-focal disabling spasticity (N-FDS) patients who are resistant or intolerant to oral therapy. **METHODS:** A markov model was developed to estimate clinical and economic outcomes for patients treated with ITB or CMM. Treatment effects, patients´ baseline characteristics, resource utilization and health utility values were taken from the EPICE study. The model was built in accordance with the Institut Guttmann´s clinical practice, a reference center in Spain. Unit costs were obtained from the cited center. The analysis was conducted from the Institut Guttmann´s perspective over a lifetime horizon with direct medical costs (2013) and outcomes discounted at 3%. Uncertainty was assessed through univariate and multivariate sensitivity analysis (SA). **RESULTS:** When comparing ITB with CMM, the model estimates ITB would increase remaining lifetime costs by €35,605 and result in a QALY gain of 1.06; thus showing an incremental cost-effectiveness ratio (ICER) of €33,619 per QALY gained. SA reflecting the most current clinical practice at the Institut Guttmann (where now a new catheter, associated with an 80% reduction in adverse events, is used) showed an ICER of €27,805 per QALY gained. ICER results were also sensitive to changes in the post-operation hospitalization period, baclofen dose titration management, pump battery life, and health utility values. **CONCLUSIONS:** The present evaluation results in an ICER of ITB against CMM, in the treatment of N-FDS patients who are resistant or intolerant to oral therapy at the Institut Guttmann, close to a willingness-to-pay threshold of €30,000 per